

WHAT IS CLAIMED IS:

1. A connector ferrule for an optical connector with a pair of guide holes for guide pin insertion and one or a plurality of optical fiber positioning holes extending inwardly from the connection end surface,

where in said connector involves a filler with an average particle size of no more than 20  $\mu\text{m}$  and having a chamfer provided at the opening edge portion of said guide holes on the connection end surface side thereof.

2. The connector ferrule according to claim 1, wherein the maximum particle size of said filler is no more than 40  $\mu\text{m}$ .

3. The connector ferrule according to claim 1, wherein the surface roughness of said chamfer is 0.01 to 2.0  $\mu\text{m}$ .

4. The connector ferrule according to claim 1, wherein the opening diameter of said guide hole at said connection end surface is formed to be larger by 0.3 to 0.8 mm than the diameter of said guide hole inside the connector ferrule.

5. The connector ferrule according to claim 1, wherein the chamfering angle of said chamfer is 90 to 150 degrees.

6. The connector ferrule according to claim 1, wherein said guide hole comprises a first hole portion with a substantially constant diameter connected to

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said chamfer and extending inside the connector ferrule and a second hole portion connected to said first hole portion, extending to the end surface side opposite to said connection end surface and having a diameter  
5 larger than that of said first hole portion.

7. The connector ferrule according to claim 1, wherein said filler is silica.

8. An optical connector comprising:

a connector ferrule according to claim 1;

10 an optical fiber inserted and secured inside the optical fiber positioning hole of said ferrule; and

a pair of guide pins provided with a curved portion, that has been rounded, at the end thereof.

15 9. The optical connector according to claim 8, wherein said guide pin is inserted and fixed in said guide hole in a state in which the tip thereof protrudes from said connection end surface by a prescribed length.

20 10. The optical connector according to claim 8, wherein the length from the base of the curved portion of said guide pin to the tip of said guide pin is no less than 0.1 mm and no more than half of the diameter of said guide pin.

25 11. A making method for a connector ferrule for an optical connector comprising guide holes for inserting a pair of guide pins and optical fiber

positioning holes extending inward from the connection end surface, by filling the inside of a die with a resin and curing the resin,

5 wherein said resin comprises a filler with an average particle size of no more than 20  $\mu\text{m}$ ; and

a chamfer is formed at the end portion of the guide hole of the connector ferrule at the connection end surface side by die molding or a subsequent processing after molding.

10 12. The making method for a connector ferrule according to claim 11, wherein the maximum particle size of said filler is no more than 40  $\mu\text{m}$ .

15 13. The making method for a connector ferrule according to claim 11, wherein the surface roughness of the chamfer of said ferrule is adjusted to 0.01 to 2.0  $\mu\text{m}$  by adjusting the particle size distribution of said filler.

20 14. The making method for a connector ferrule according to claim 11, wherein the guide hole diameter on the side opposite to the connection end surface is made larger than the guide hole diameter on the connection end surface during die molding or after molding.

25 15. The making method for a connector ferrule according to claim 11, wherein said filler is silica.

16. The making method for an optical connector

comprising the steps of:

preparing the connector ferrule according to claim 1 and a pair of guide pins provided with a curved portion, that has been rounded, at the end thereof;

5 inserting and fixing optical fibers in optical fiber positioning holes of said ferrule; and

inserting said guide pins in guide holes of said ferrule and fixing said pins in a state in which the tip thereof protrudes by the prescribed length from the connection end surface of the connector ferrule.

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